#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-002190 Address: 333 Burma Road **Date Inspected:** 14-Apr-2008

City: Oakland, CA 94607

**OSM Arrival Time:** 2300 **Project Name:** SAS Superstructure **OSM Departure Time:** 800 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes An Qing Xiang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 Tower **Bridge No: Component:** 

## **Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

New Tower Shop Bay 2:

The QA Inspector randomly observed ZPMC welder Xu Xui Shui ID Number 040489, utilizing the Submerged Arc Welding (SAW) Process in the 1G Position (Flat Groove) with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2221-B-U3c-S-1, to weld the root pass in Weld Joint (WJ) SSD1-SA16E/G-11B on Tower Face E Sub-Assembly SA16(S) + p149(S) to p150(S) + p151(S). The QA Inspector randomly observed ZPMC CWI An Qing Xiang monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 480 amps, 30.3 volts with a travel speed of 428 millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Xu Yan ID Number 052917, utilizing the SAW Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-T-2221-B-U3c-S, to weld the fill pass in WJ SSD1-SA173A/K-15B on Tower Face E Sub-Assembly p351(S) to p37(S). The QA Inspector randomly observed ZPMC CWI An Qing Xiang monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 660 amps, 33.5 volts with a travel speed of 635 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

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The QA Inspector randomly observed ZPMC welder Xu Xiu Shui ID Number 040489, utilizing the SAW Process in the 1G Position (Flat Groove) with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2221-B-U3c-S, to weld the fill pass in Weld Joint (WJ) SSD1-SA16E/G-11B on Tower Face E Sub-Assembly SA16(S) + p149(S) to p150(S) + p151(S). The QA Inspector randomly observed ZPMC CWI An Qing Xiang monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 666 amps, 33 volts with a travel speed of 612 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welding personnel performing heat straightening operations on Tower Face E piece mark p793 per ZPMC Heat Straightening Request (HSR) HSR1(T)-681, to remove mill induced distortion.

The QA Inspector randomly observed a ZPMC Carbon Air Arc Gouging Operator utilizing the Carbon Air Arc Gouging Process to back gouge WJ ESD1-SA107A/J-16A and WJ ESD1-SA107A/J-18A. The attached photograph provides additional detail.







#### **Summary of Conversations:**

There were no relevant conversations.

## **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Franco, Charlie	Quality Assurance Inspector
Reviewed By:	Hager,Craig	QA Reviewer